

Faculty Profile

Personal Information

a) Name : Dr. Jagesvar Verma
b) Designation : Assistant Professor
c) Office address : 241, Faculty Building, NIAMT
d) Date of joining : 12/06/2019
e) Email ID : jagesvarverma@niamt.ac.in
f) Contact No. : 9110061589

Educational qualification

: **PhD**
Visvesvaraya National Institute of Technology (VNIT) Nagpur
Thesis Title: "Investigations on welding and corrosion behavior of dissimilar metal joints of duplex stainless steel with austenitic and ferritic stainless steels"
: **M.Tech**
National Institute of Technology Truchirappalli (NIT Trichy), Tamilnadu
Thesis Title: "Processing of Aluminum Alloy 5083 Reinforced with Alumina Through Microwave Sintering"
: **B.Tech**
Government Engineering College, Jagdalpur, Baster, C.G.
Project Title: "Fabrication of Articulated Robotic Manipulator-Mechanically Controlled Robotic Arm

Experience

: 09 Years

Expertise information

: Welding, Weld Heat Transfer Modelling and Simulation, Materials Characterization

Courses taught (most recent)

:

a) UG

: Engineering Thermodynamics, Applied Thermodynamics, Strength of Materials, Fluid Mechanics, Special Foundry Processes, Heat Treatment Technology, Engineering Materials Welding Technology

b) PG

: Advanced Welding Technology, Mechanical Behavior of Materials

Continuing education

: 8 Module of Faculty Development Program by NITTTTR, Short-Term Courses on Robotics, SWAYAM-NPTEL certificate Course on Welding and Casting Simufact Training on Welding and Forming Simulation Software ANSYS Training, CATIA and Deform Software

Publications

2023 Published

25. Ankur Bansod, S. Shukla, G. Gahiga, and **Jagesvar Verma**, Influence of filler wire on metallurgical, mechanical, and corrosion behaviour of 430 ferritic stainless steel using a fusion welding process. *Materials Research Express*, 10(3), 2023, p.036513.

24. Pandey, P.K., Singh, M., Rathi, R. and **Verma, J.**, Analysis and optimization of welding techniques for austenitic stainless steel using grey relational analysis. *International Journal on Interactive Design and Manufacturing (IJIDeM)*, 2023, pp.1-9.

2022 Published

23. Cetan Tembhurkar, Ravinder Kataria, Sachin Ambade, **Jagesvar Verma**. A Critical Review on Dissimilar Joining of ASS and FSS. In Proceedings of the International Conference on Industrial and Manufacturing Systems (CIMS-2020) (pp. 505-518). Springer, Cham.

22. Prashant Kumar Pandey, Rajeev Rathi, and **Jagesvar Verma**. "Recent Trends in Weldability and Corrosion Behavior of Low Nickel Stainless Steels." In *Recent Trends in Industrial and Production Engineering*, pp. 193-203. Springer, Singapore, 2022.

2021 Published

21. Chetan Tembhurkar, Ravinder Kataria, Sachin Ambade, **Jagesvar Verma**, Anand Sharma, and Saurabh Sarkar. "Effect of fillers and autogenous welding on dissimilar welded 316L austenitic and 430 ferritic stainless steels." *Journal of Materials Engineering and Performance* 30, no. 2 (2021): 1444-1453.

2020 Published

20. Tembhurkar, Chetan, Ravinder Kataria, Sachin Ambade, and Jagesvar Verma. "Transient analysis of gta-welded austenitic and ferritic stainless steel." In *Advances in Materials Processing*, pp. 59-65. Springer, Singapore, 2020.

2019 Published

19. **Jagesvar Verma**, Ravindra V. Taiwade, Ravinder Kataria, Kanishka Jha, Vipin Tandon, Evolution of Metallurgical Phases and Its Co-relation with Mechanical Properties and Corrosion Resistance of 22Cr–5Ni–3Mo and 16Cr–10Ni–2Mo Dissimilar Weldments, *Metallography, Microstructure, and Analysis*, (Scopus indexed), 2019 <https://doi.org/10.1007/s13632-019-00558-9>

18. Utkarsh Waghmare, A.S. Dhoble, Ravindra Taiwade, **Jagesvar Verma**, Himanshu Vashishtha Prediction of heat affected zone and other mechanical properties of welded joints of HSLA A588-B of jet blast deflector, *World Journal of Engineering*, (Scopus indexed), 2019 <https://doi.org/10.1108/WJE-08-2018-0281>

17. Kanishka Jha, Ravinder Kumar, **Jagesvar Verma**, Potential Biodegradable matrices and fibre treatment for green composites- A Review, *AIMS Materials Science*, (Scopus indexed), 2019 10.3934/matricsci.2019.1.xx

16. Ankur V. Bansod, Awanikumar P. Patil, **Jagesvar Verma**, Sourabh Shukla, Microstructure, Mechanical and Electrochemical Evaluation of Dissimilar low Ni SS and 304 SS using Different Filler Materials, *Materials Research*, 2019; 22(1): e20170203, DOI: <http://dx.doi.org/10.1590/1980-5373-MR2017-0203>

15. A. Basu and Manoj Chopkar Anil Kumar, Digvijay Parganiha, **Jagesvar Verma**, Prasenjit Biswas, On the synthesis and characterisation of novel composite structured high-entropy alloys, *Philosophical Magazine Letters*, 2019, (SCI).

2018 Published

14. **J. Verma**, RV Taiwade, R Kataria, A Kumar, Welding and electrochemical behavior of ferritic AISI 430 and austeno-ferritic UNS 32205 dissimilar welds *Journal of Manufacturing Processes* 34 (2018) 134–152. (SCI INDEXED), IF: 2.8

13. Anil Kumar, Manoj Kumar Chopkar, **Jagesvar Verma***, Ravindra Taiwade, Vipin Tandon, Sourabh Shukla, Effect of filler and autogenous TIG welding on microstructure, mechanical properties and corrosion resistance of nitronic 50 stainless steel, accepted (2018) *Materials Research Express*, (SCI INDEXED), <https://doi.org/10.1088/2053-1591/aaefc>, IF 1.15

12. P Pant, **J. Verma**, R Taiwade, KVP Prabhakar, Influence of advanced laser-arc hybrid welding and conventional MIG process on microstructure, mechanical properties and corrosion resistance of dissimilar joints , *Materials Research Express* 5(6) (2018) . (SCI INDEXED), IF 1.15

11. **J. Verma**, R. V. Taiwade, Chandraprakash reddy and R. K Khatirkar, Effect of Friction Stir Welding Process

Parameters on Mg-AZ31B/Al-AA6061 Joints, *Materials and Manufacturing Processes*, 33(3) (2018), 308-314. (SCI indexed), IF 2.8

10. Kanishka Jha, Ravinder Kataria, and **Jagesvar Verma**, Non-Linear Modelling of roughness parameters in finishturning of EN31 high carbon steel, *Int. J. of Machining and Machinability of Materials*, 10.1504/IJMMM.2018.10016232. (Scopus indexed), SJR 0.39

9. Ravi Pratap Singh, Ravinder Kataria, Jatinder Kumar and **Jagesvar Verma**, Multi- response optimization of machining characteristics in ultrasonic machining of WC-Co composite through Taguchi method and grey-fuzzy logic, *AIMS Materials Science*, 5(1): 75–92. DOI: 10.3934/mat.2018.1.75 (Scopus indexed), SJR 0.15)

2017 Published

8. **J. Verma** and R. V Taiwade, Effect of Welding Processes and Conditions on the Microstructure, Mechanical Properties and Corrosion Resistance of Duplex Stainless Steel Weldments – A review, *Journal of Manufacturing Processes* 25 (2017) 134–152. (SCI indexed), IF 2.8

7. **J.Verma**, R. V. Taiwade, Evaluation of Microstructure, Mechanical Properties and Corrosion Resistance of Friction Stir Welded, *Journal of Materials Engineering and Performance*, 2017, 26 (2017) 4738–4747. (SCI indexed), IF 1.34

6. **J. Verma**, R.V. Taiwade, R.K. Khatirkar, S.G. Sapate, A.D. Gaikwad, Microstructure, mechanical and intergranular corrosion behavior of dissimilar DSS 2205 and ASS 316L shielded metal arc welds. *Transactions of the Indian Institute of Metals*, 70(1) (2007), 225-237. (SCI indexed), IF 0.91

5. **J. Verma**, R. V. Taiwade and R. Sonkusare, Effects of austenitic and duplex electrodes on microstructure, mechanical properties, pitting and galvanic corrosion resistance of ferritic and dual- phase stainless steel dissimilar joints, *Journal of Materials Research* , Cambridge, UK, 32(16), 3066-3077 (SCI indexed) <https://doi.org/10.1557/jmr.2017.269>, IF 1.49

2016 Published

4. **J. Verma**, R. V. Taiwade and R. K Khatirkar, A Comparative Study on the Effect of Electrode on Microstructure and Mechanical Properties of Dissimilar Welds of 2205 Austeno-Ferritic and 316L Austenitic Stainless Steel, *Materials Transactions* 57 (2016) 494-500. (SCI indexed)

3. **J. Verma** and R. V. Taiwade, Dissimilar Welding behavior of 22% Cr Series Stainless Steel with 316L and its Corrosion Resistance in Modified Aggressive Environment, *Journal of Manufacturing Processes* 24 (2016) 1–10. (SCI indexed), IF 2.8

2. **J. Verma** and R. V. Taiwade, Effect of Austenitic and Austeno-Ferritic Electrodes on 2205 Duplex and 316L Austenitic Stainless Steel Dissimilar Welds, *Journal of Materials Engineering and Performance* 25 (2016) 4706–4717. (SCI indexed), IF 1.34

2012 Published

1. **J. Verma**, Processing of 5083 Aluminum Alloy Reinforced with Alumina through Microwave Sintering, *J Miner Mater Charact Eng*, 11 (2012) 1126-1131.

Book Chapter

Fabrication and In Vitro Corrosion Characterization of 316L Stainless Steel for Medical Application, Kanishk Jha, **Jagesvar Verma**, Chander Prakash- Biomaterials in Orthopaedics and Bone, 2019 – Springer

Book Published

Duplex Stainless Steel-An Industrial Need; A Review, LAP Lambert Academic Publishing, Germany, ISBN-13: 978-3-659-97124-2 and ISBN-10: 3659971243
Book Language: English

By (author): Ravindra Taiwade and Jagesvar Verma

Published on: 2016-10-25, <https://www.lap-publishing.com>

Patent Awarded/Granted

Name: A Process of Preparation of Etchant. Filed application No. **201721012181**, Patent No. **382191**, Awarded on **22/11/2021**

Doctoral students

:

- 1) Coating behavior of power generation grade stainless steels - Rahul Kumar Ravi – Dr. Jagesvar Verma, Co-Guide Dr. Anoop Kumar Sood - Ongoing (2021 onwards)
- 2) Theoretical and experimental analysis of welding behavior of super ferritic stainless steels– Prashant Kumar Pandey – Co-Guide – Ongoing (2019 onwards)
- 3) Thermal simulation of dissimilar welded Cr-Mo P91/P22 alloy steels with experimental validation – Sanjeet Kumar – Co-Guide – Ongoing (2021 onwards).

Dissertation (PG)

:

- 1) Ravi Kumar, Investigation on the effect of friction stir welding process parameters on 2050 Al-Li Alloy Weld (2020).
- 2) Jagbandhu Sahoo, Numerical simulation and experimental characterization of al-li-cu alloy weldments by friction stir welding (2021).
- 3) Kumar Shambhav, Experimental investigation of friction stir welded aerospace grade aluminum alloy (2022).
- 4) Sitanshu,
- 5) Vipul Anand, Experimental and simulation of dissimilar weldments of super duplex and austenitic stainless steels (2023)

Sponsored projects

: None

Consultancy projects

: None

Workshops / seminars / conferences organized / attended

1. Asian pacific corrosion control conference (27-30 January, 2016), **IIT Mumbai**
2. 4th International Conference on Advances in Materials and Materials Processing (ICAMMPIV), (5-7th Nov. 2016), **IIT Kharagpur**
3. 3rd Indo-Austrian Symposium on 'Advances in Materials Engineering' (AME 2016), (19th and 20th Dec. 2016), **IIT Mumbai**
4. NRC-M Workshop on advance in corrosion engineering, **IISc, Bangalore** (22-24 December 2014),
5. Workshop on corrosion , **IIT, Mumbai** (25-27 January 2016)
6. Workshop on COMSOL Multiphysics 3-Day intensive Training course, **New Delhi** (9-11 March 2016)
7. Indo-Belgian workshop on crystallography & texture, **IEST, Shibpur** (10-12 November 2016)
8. Welding as a Career”-The Untold Success” organized by Yeshwantrao Chavan College of Engineering, Nagpur, 29th June 2020.
9. Digital Transformation with Industrial Internet of Things & Augmented Reality, NIFFT, Ranchi, July 2020 College of Engineering, Nagpur, 29th June 2020.

Awards / Honours (Memberships, fellowships, etc.) :

- a) Best proposal award, Covid-19 challenge, NIAMT, 2020
- b) Certificate of Appreciation as a session chair in the 3rd International Conference on Functional Materials and Performance (ICFMMP-2022)
- c) Certificate of Appreciation as a reviewer in the International Conference on Robotics, control, automation and artificial intelligence (RCAAI-2022)
- d) Member, The Indian Science Congress,
Association Membership No: A1491

Others (facilities, laboratories developed, etc.) :

- a) Simufact welding and forming simulation lab development (Mech. & Manuf. Dept.)
- b) Thermodynamics laboratory (Mech. & Manuf. Dept.)

Additional responsibilities :

- a) Member of language lab development committee, NIAMT
- b) Member of centralized computer center committee, NIAMT
- c) Member of bid opening committee, NIAMT
- d) Thermodynamics lab in charge

Google Scholar : <https://scholar.google.com/citations?user=a3EtgLQAAAAJ&hl=en>

Orcid Id: <https://orcid.org/0000-0003-1646-9228>

Scopus Id: 57188766280

World Scientist and University Rankings 2023: <https://www.adscientificindex.com/scientist/jagesvar-verma/351363>

Technical Skills :

- Instruments: Handling the Arc welding instruments, EDM, XRD, SEM-(EDS), Optical Microscope, Versastat, Solartron1285, BIOLOGIC instrument for corrosion testing, ferritoscope, Magnetic particle Inspection, Electro-polishing, working on lathe, shaper machine.
- Core Softwares: Simufact welding, simufact forming, Deform software, ANSYS, X'Pert High Score Plus, J-stage software, Origin lab, Core ware
- Designing Softwares: Adobe Photoshop, AutoCAD, Minitab, DOE, CATIA

Reviewer :

Journal of Manufacturing Processes (Elsevier)

Measurement and Control (SAJE)

Steel Research International

Journal of Materials Engineering and Performance (Springer),

Materials Research Express (IOP)

Meatal Materials International